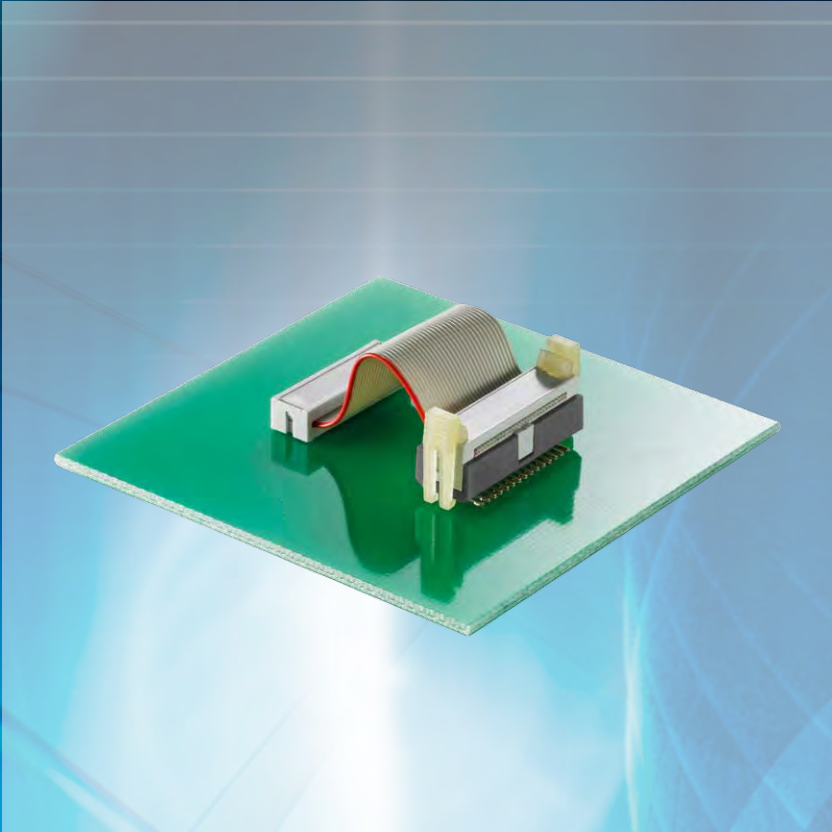


ODU MINI-FLAKAFIX®



Contents

Chapter		From page	
1	IDC sockets, Series 525	3	
2	Pin headers, Series 515	9	
3	IDC PCB connectors, Series 533	15	
4	Flat cable and processing tools	17	

Description:

The ODU MINI-FLAKAFIX® series is the right choice for connecting PCBs across larger distances and at any angle or changeable angles. The connection between board and cable can be handled in either pluggable or permanently soldered versions.

**Board-to-wire connector,
Pitch 1.27 × 2.54 mm. ODU also offer
cable assemblies.**

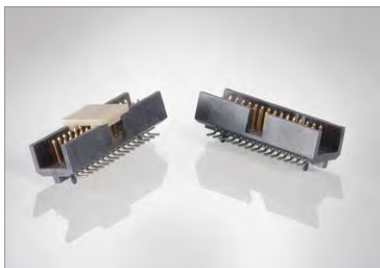
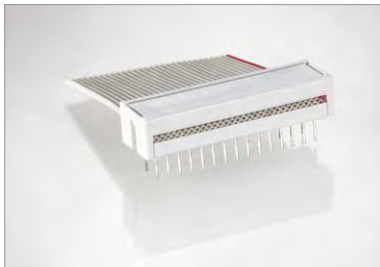
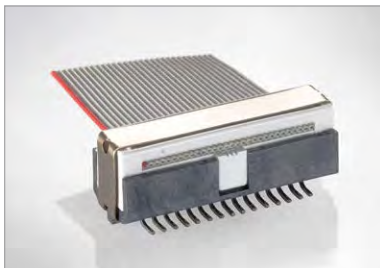
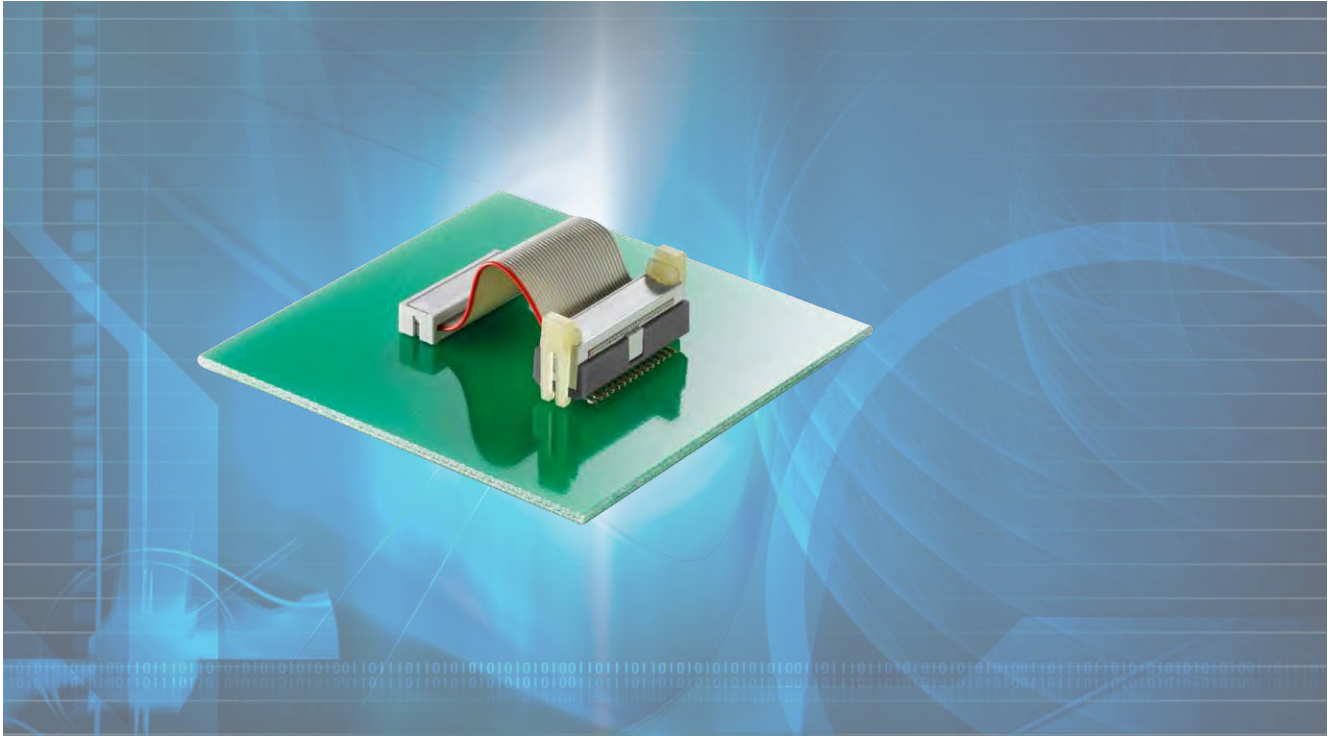
Features:

- Detachable connection using IDC sockets and headers
- Non-detachable connection using IDC PCB connector
- 2-row
- 10, 20, 30, 40 and 50 contacts
- Fully automatic placement (pick-and-place) in the SMT versions using vacuum adapter plate and tape-and-reel packaging
- Extensive accessories and processing tools
- Assembly directly by ODU also possible

All dimensions in mm.
Some of the pictures are illustrations.
Errors and omissions excepted.

Issue: 2014-03

ODU MINI-FLAKAFIX®
IDC sockets
Series 525



Contents

IDC sockets, Series 525

Chapter		From page	
1	IDC sockets with double action spring contact	5	
2	Accessories	6	
	Locking latch for IDC sockets and pin header	6	
	Locking latch for IDC sockets and SMT pin headers	6	
	Strain relief for IDC sockets	8	

IDC sockets with IDC termination, Series 525

Double action spring contact in pitch 1.27 × 2.54 mm, for flat cable termination

Features

- IDC contact
- With keying pin
- Available with metal locking latch or plastic locking latch
- 10, 20, 30, 40 and 50 contacts

Technical data

Electrical specification

- Contact resistance: ≤ 6 mΩ
- Test voltage: 500 V eff.
- Operating voltage: 30 V
- Nominal current: 0.5 A
(single contact at 25°C)

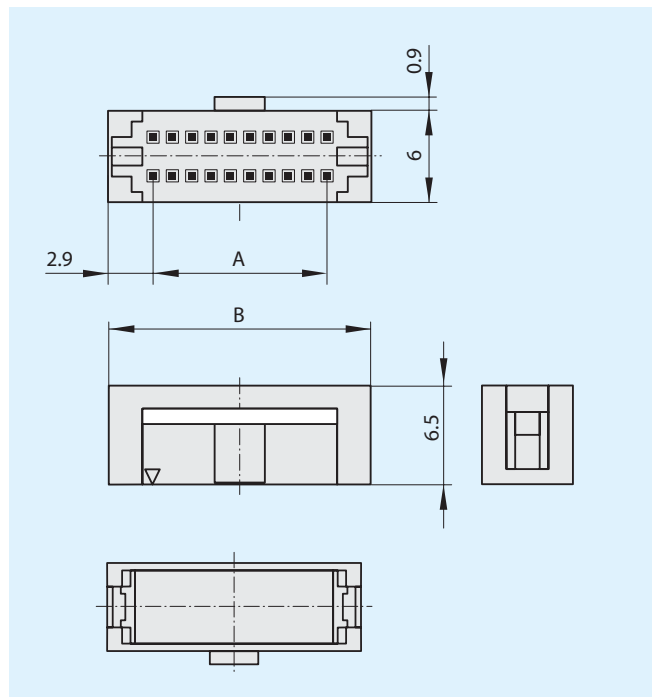
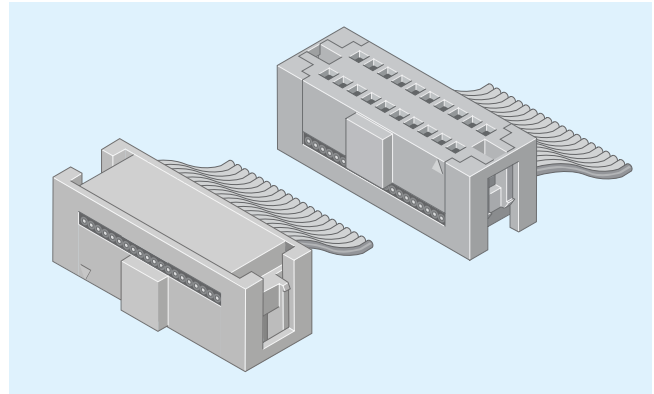
Mechanical specification

- Operating temperature: -40°C to +125°C
- Humidity level: 75% rel. humidity in accordance with DIN EN 60721-3-3
- Mating force per contact: 0.18 N
- Mating cycles: > 100

Material and surface plating

- Contact surface
 - Mating area: 0.75 μm Au on 1.25 μm Ni / MIL-G-45 204B Class 00
 - Termination area: 1.0 μm Sn on 1.25 μm Ni
- Insulator material: PBT grey
GF in accordance with UL94 V-0
- Contact material: Copper alloy

Locking latch, see page 6.



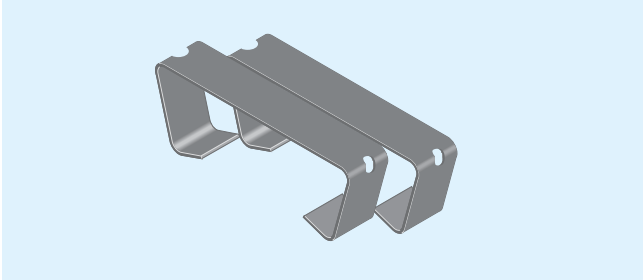
Order information and dimensional table (All dimensions are in mm)

Number of contacts	Part number ¹⁾	Dimension A	Dimension B	Packaging unit
10	525.060.035.010.010	5.08	10.88	100
20	525.060.035.020.010	11.43	17.23	60
30	525.060.035.030.010	17.78	23.58	40
40	525.060.035.040.010	24.13	29.93	30
50	525.060.035.050.010	30.48	36.28	20

¹⁾ 010 (last block) = Packaging: cardboard box

Locking latch

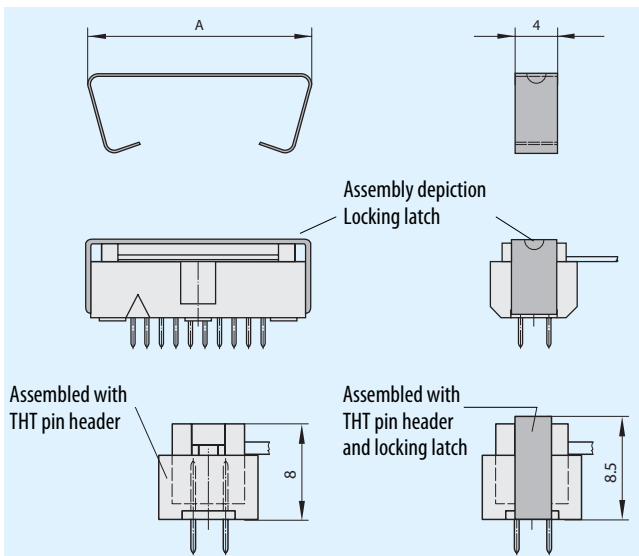
Locking latch for pin headers (solder version) Series 515.067 ... and 515.267 ...



Features

For locking pin headers, Series 515 (solder version), straight and angled design, with IDC sockets, Series 525

Dimensional drawing (schematic)



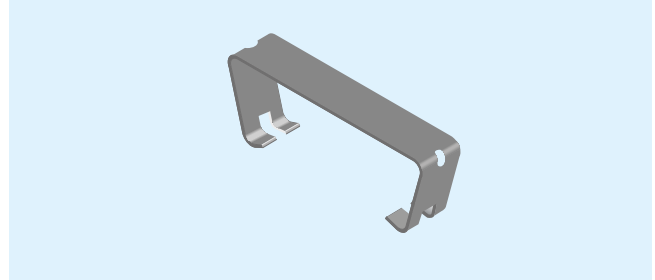
Order information and dimensional table (All dimensions are in mm)

Number of contacts	Part number	Dimension A
10	515.067.710.700.000	14.35
20	515.067.720.700.000	20.70
30	515.067.730.700.000	27.05
40	515.067.740.700.000	33.40
50	515.067.750.700.000	39.75

General information

These locking latches are made of high-grade spring steel. Special features are the absolutely solid fit and simple assembly and disassembly (with small screwdriver).

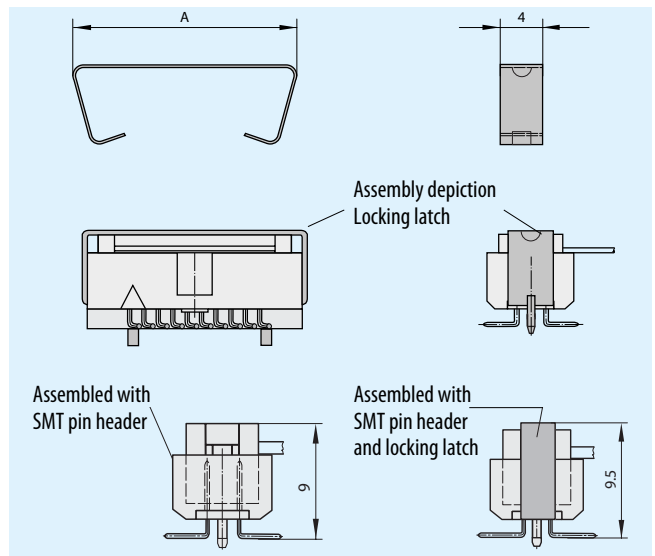
Locking latch for SMT pin headers Series 515.568 ...



Features

For locking pin headers, Series 515 (SMT version) with IDC sockets, Series 525

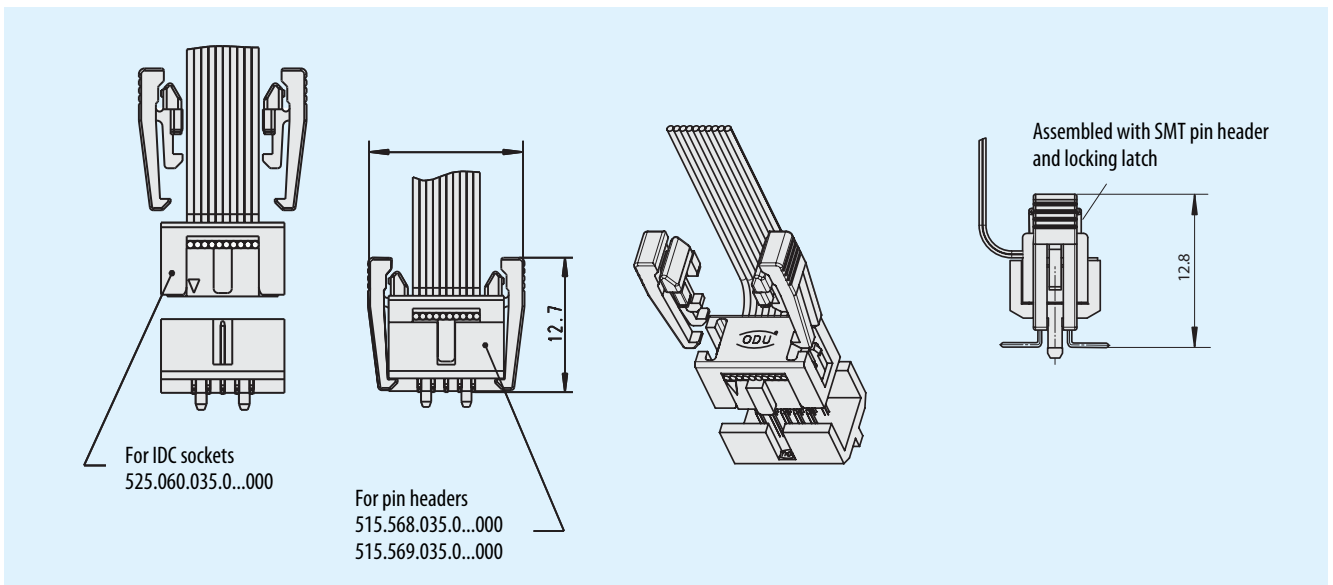
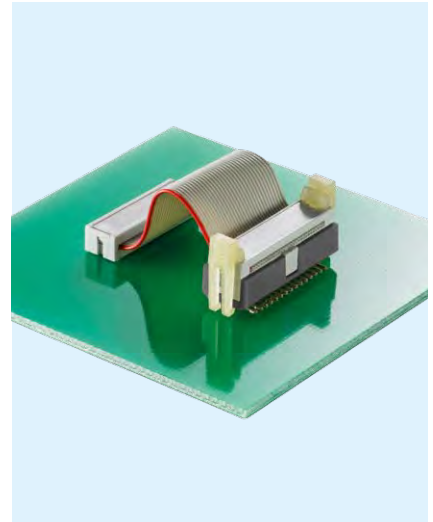
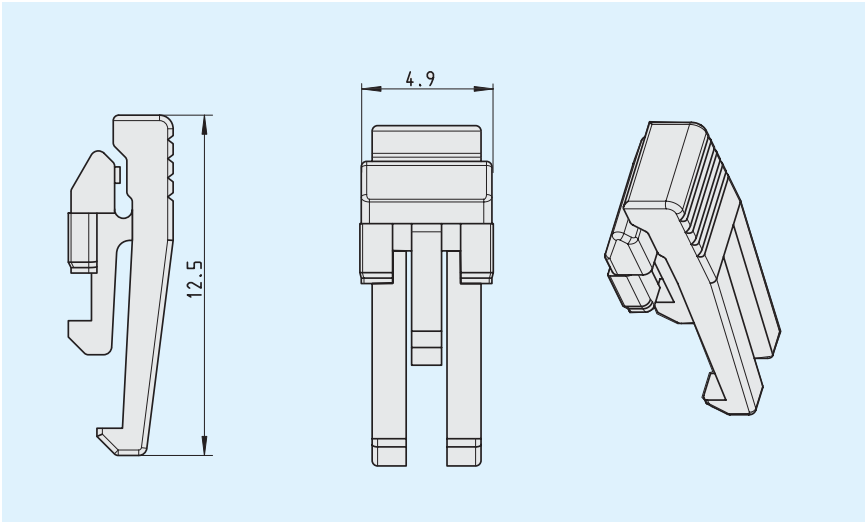
Dimensional drawing (schematic)



Order information and dimensional table (All dimensions are in mm)

Number of contacts	Part number	Dimension A
10	515.568.710.700.000	11.0
20	515.568.720.700.000	17.3
30	515.568.730.700.000	23.7
40	515.568.740.700.000	30.0
50	515.568.750.700.000	36.4

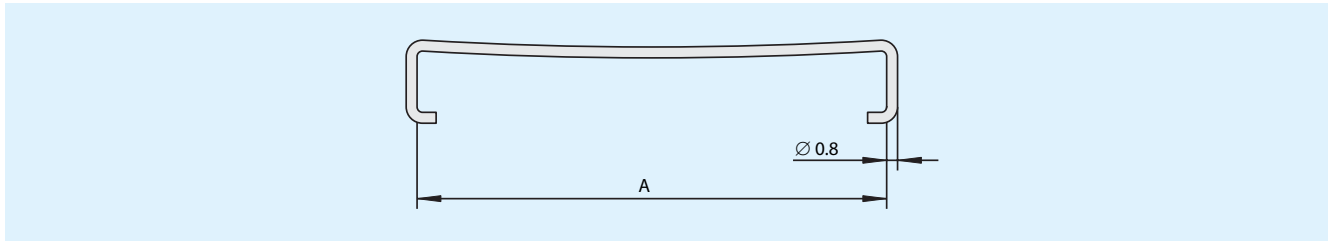
Plastic locking latch for SMT pin headers



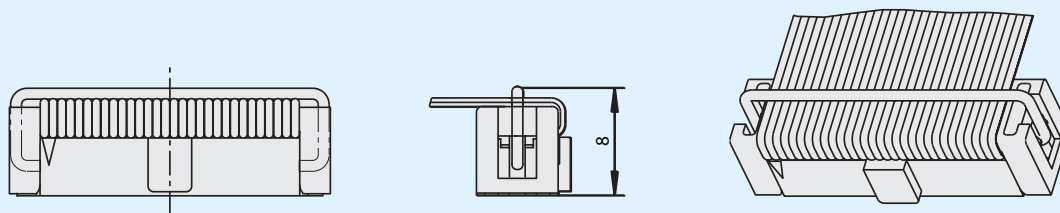
Material: PA
 Part number: 525.060.105.923.000

Strain relief for IDC sockets with IDC termination, Series 525.060. ...

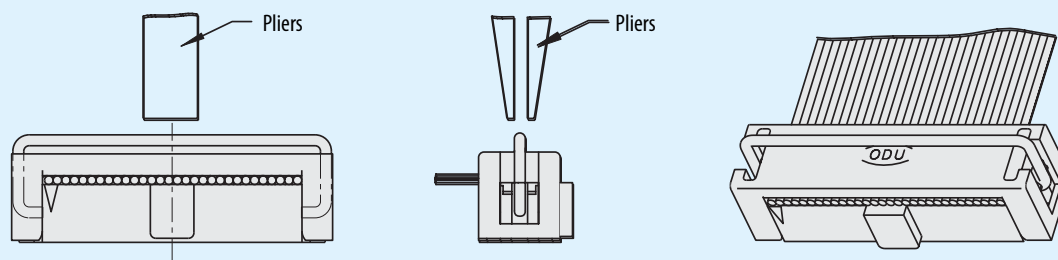
Material: spring steel wire



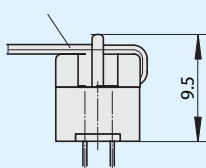
1. Metal latch as strain relief



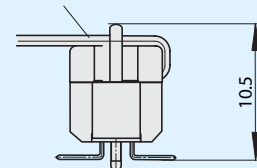
2. Metal latch as demating aid



Assembled with THT pin header and strain relief



Assembled with SMT pin header and strain relief



Order information and dimensional table

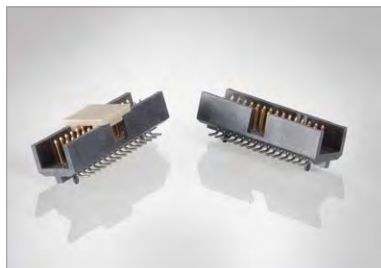
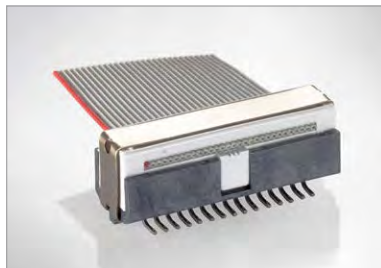
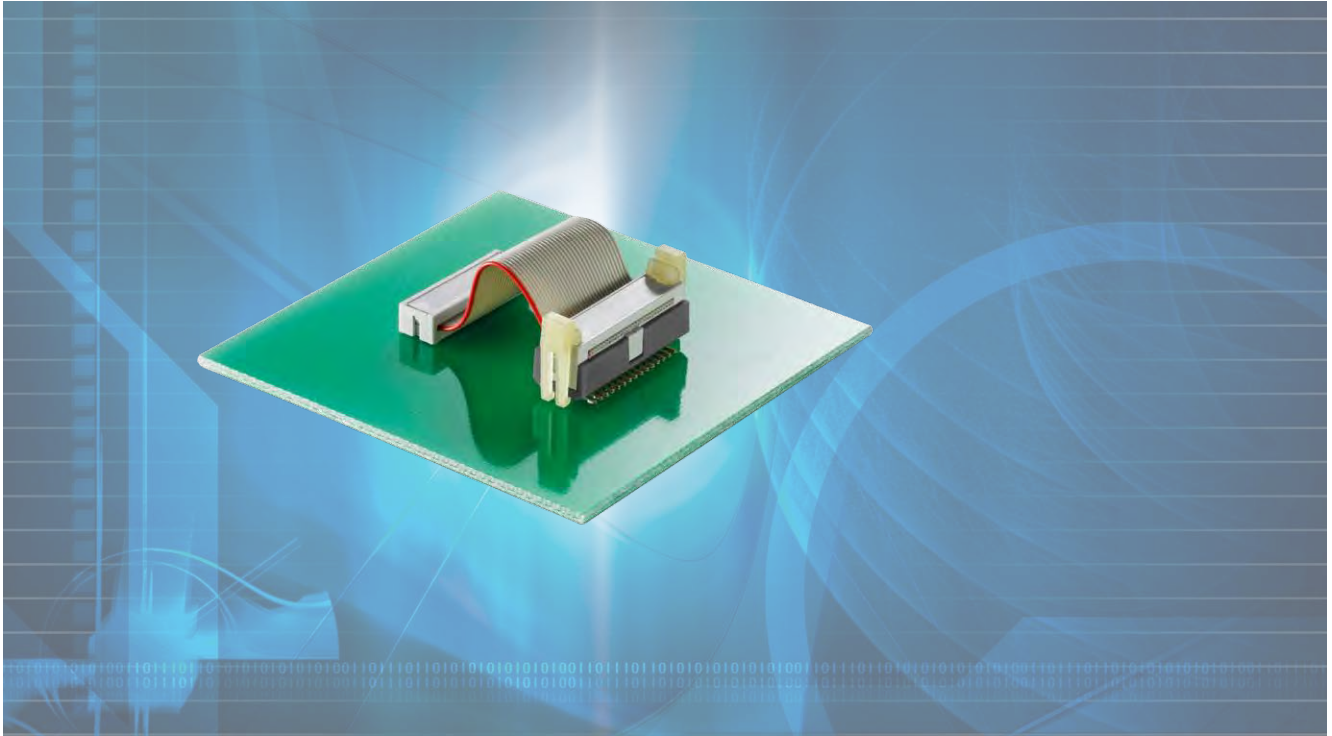
(All dimensions are in mm)

Number of contacts	Part number	Dimension A
	Without latch	
10	525.060.710.700.000	9.10
20	525.060.720.700.000	15.45
30	525.060.730.700.000	21.80
40	525.060.740.700.000	28.15
50	525.060.750.700.000	34.50

ODU MINI-FLAKAFIX®

Pin headers

Series 515



Contents

Pin headers, Series 515

Chapter		From page	
1	Number codes for ODU MINI-FLAKAFIX®, Series 515	11	
2	THT pin header, straight assembly	12	
3	THT pin header, angled assembly	13	
4	SMT pin header, straight assembly	14	

Explanation of number codes for ODU MINI-FLAKAFIX®, Series 515

No.	Meaning	Coding
A	Series	515 = Pin header
B	Type	067 = Straight THT model 267 = Angled THT model 568 = Straight SMT model
C	Surface plating	035 = In mating area: 0.75 µm Au on Ni in termination area: 2.0 µm Sn on Ni
D	Number of contacts	010 = 10 contacts (example)
E	Packaging	003 = Tube (for SMT model) 010 = Cardboard (box) (for THT model) 050 = Tape-and-reel (for SMT versions)

Ordering example for Series 515

A	B	C	D	E
515	.067	.035	.010	.010

A = Series: 515 pin header

B = Type: straight THT model

C = Surface plating: in mating area 0.75 µm Au on Ni
in termination area 2.0 µm Sn on Ni

D = Number of contacts: 10

E = Packaging: cardboard (box)

THT pin header, Series 515

2-row, straight with solder pins, in pitch 1.27 × 2.54 mm

Features

- Closed style
- Central polarisation
- Pin cross-section: 0.38 × 0.38 mm
- 10, 20, 30, 40 and 50 contacts

Technical data

Electrical specification

- Contact resistance: ≤ 6 mΩ
- Test voltage: 500 V eff.
- Operating voltage: 30 V
- Nominal current: 0.5 A (single contact at 25 °C)

Mechanical specification

- Operating temperature: -40 °C to +125 °C
- Humidity level: 75 % rel. humidity in accordance with DIN EN 60721-3-3
- Mating force per contact: 0,18 N
- Mating cycles: > 100

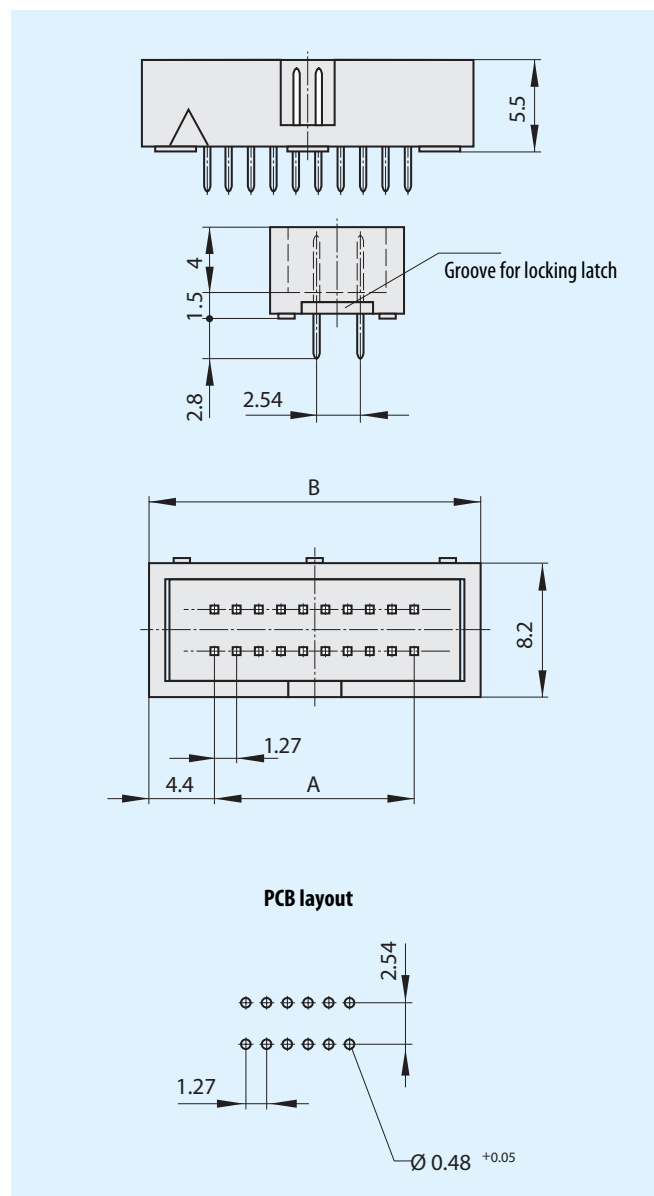
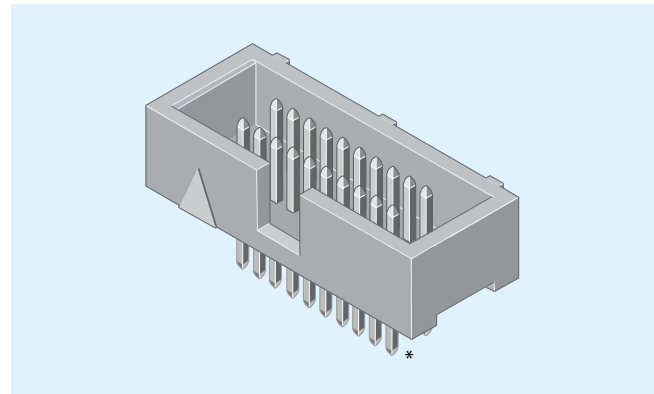
Material and surface plating

- Contact surface
 - Mating area: 0.75 µm Au on 1,25 µm Ni / MIL-G-45 204B Class 00
 - Termination area: 2.0 µm Sn on 1.25 µm Ni
- Insulator material: PBT grey GF in accordance with UL94 V-0
- Contact material: Copper alloy

Order information and dimensional table

(All dimensions are in mm)

Number of contacts	Part number	Dimension A	Dimension B	Packaging unit
10	515.067.035.010.010	5.08	13.88	010 Box
20	515.067.035.020.010	11.43	20.23	120
30	515.067.035.030.010	17.78	26.58	80
40	515.067.035.040.010	24.13	32.93	60
50	515.067.035.050.010	30.48	39.28	60



Number codes, see page 11.

* rounded in solder area

THT pin header, Series 515

2-row, angled with with solder pins, in pitch 1.27 × 2.54 mm

Features

- Closed style
- Central polarisation
- Pin cross-section: 0.38 × 0.38 mm
- 10, 20, 30, 40 and 50 contacts

Technical data

Electrical specification

- Contact resistance: ≤ 6 mΩ
- Test voltage: 500 V eff.
- Operating voltage: 30 V
- Nominal current: 0.5 A (single contact at 25°C)

Mechanical specification

- Operating temperature: -40°C tp +125°C
- Humidity level: 75% rel. humidity in accordance with DIN EN 60721-3-3
- Mating force per contact: 0.18 N
- Mating cycles: > 100

Material and surface plating

- Contact surface
 - Mating area: 0.75 µm Au on 1,25 µm Ni / MIL-G-45 204B Class 00
 - Termination area: 2.0 µm Sn on 1.25 µm Ni
- Insulator material: PBT grey GF in accordance with UL94 V-0
- Contact material: Copper alloy

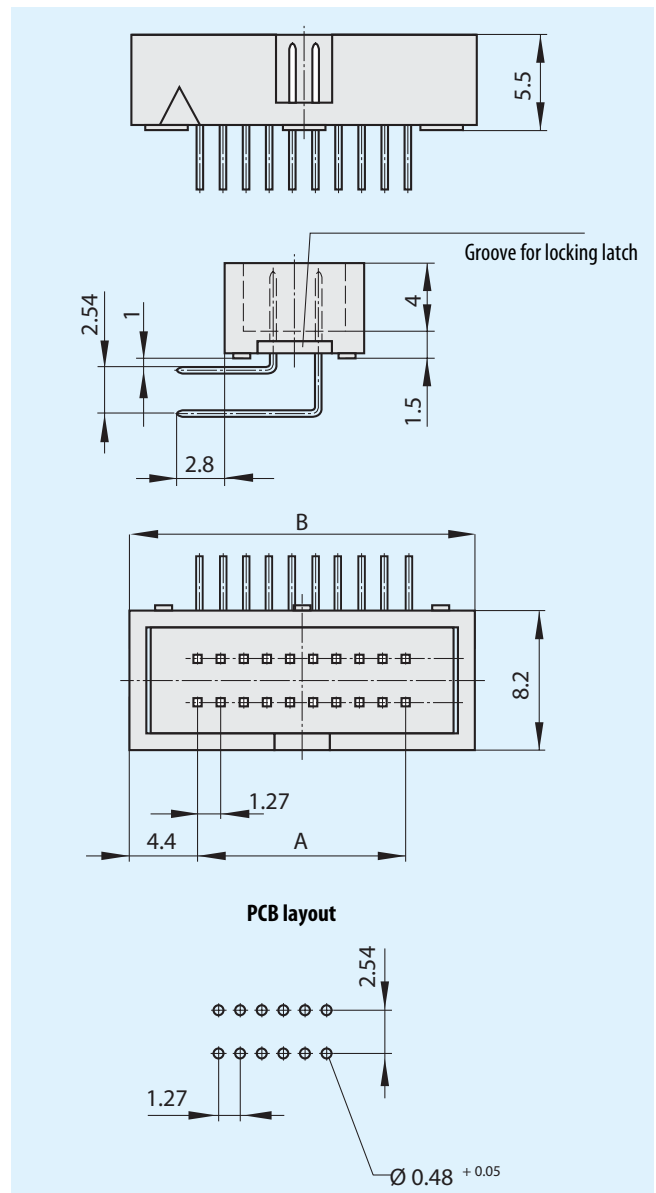
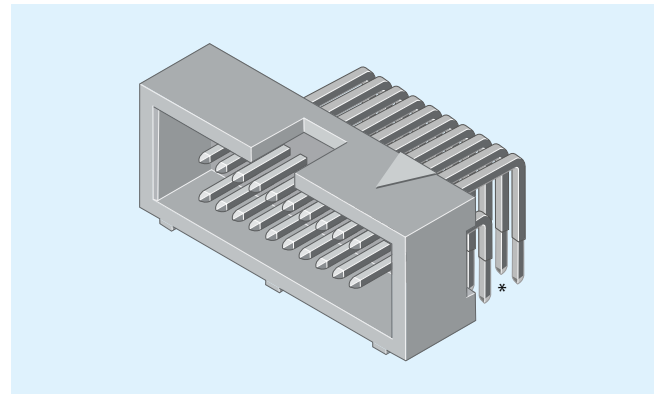
Order information and dimensional table

(All dimensions are in mm)

Number of contacts	Part number ¹⁾	Dimension A	Dimension B	Packaging unit
10	515.267.035.010.010	5.08	13.88	100
20	515.267.035.020.010	11.43	20.23	120
30	515.267.035.030.010	17.78	26.58	80
40	515.267.035.040.010	24.13	32.93	60
50	515.267.035.050.010	30.48	39.28	60

¹⁾010 (last block) = Packaging: cardboard box

Number codes, see page 11.



* rounded in solder area

SMT pin header, Series 515

2-row, straight, in pitch 1.27 × 2.54 mm

Features

- With vacuum adapter plate
- Termination type: SMT
- Pin cross-section: 0.38 × 0.38 mm
- 10, 20, 30, 40 and 50 contacts
- 2 moulded-on guiding pins

Technical data

Electrical specification

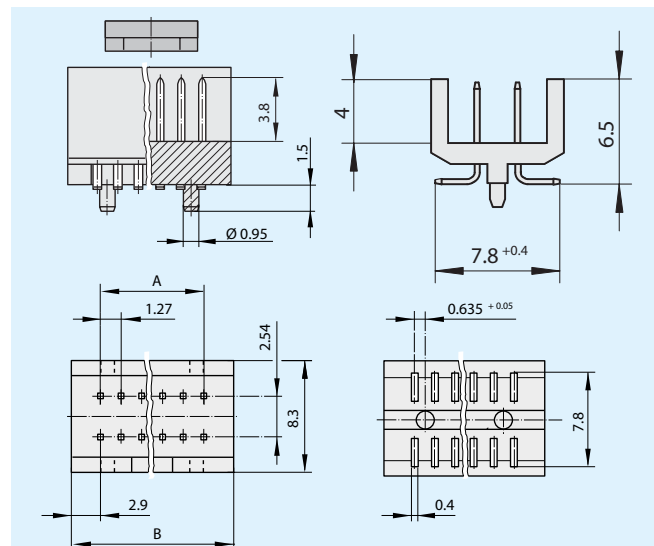
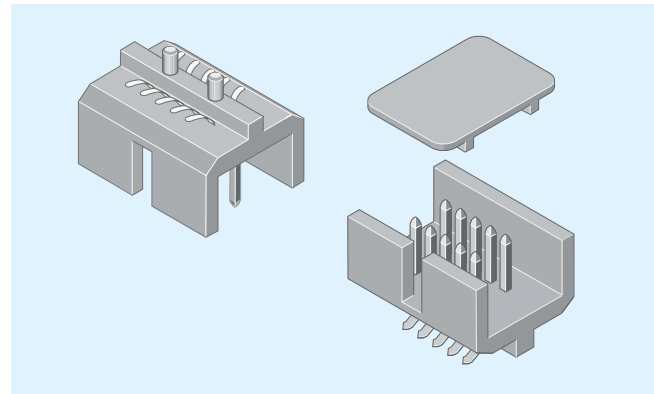
Contact resistance: ≤ 6 mΩ
 Test voltage: 500 V eff.
 Operating voltage: 30 V
 Nominal current: 0.5 A
 (single contact at 25 °C)

Mechanical specification

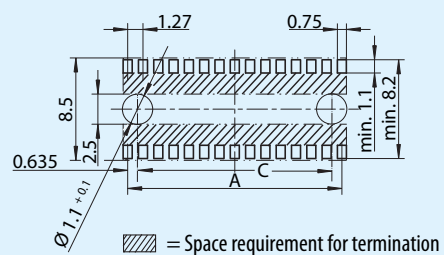
Operating temperature: -40 °C to +125 °C
 SMT solder temperature at solder point max. 30 s: 260 °C
 Humidity level: 75 % rel. humidity in accordance with DIN EN 60721-3-3
 Mating force per contact: 0.18 N
 Mating cycles: > 100

Material and surface plating

Contact surface
 Mating area: 0.75 µm Au on 1,25 µm Ni / MIL-G-45 204B Class 00
 Termination area: 2.0 µm Sn on 1.25 µm Ni
 Insulator material: LCP black
 GF in accordance with UL94 V-0
 Contact material: Copper alloy



PCB layout



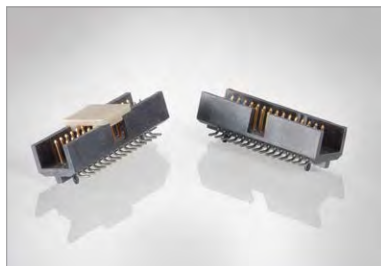
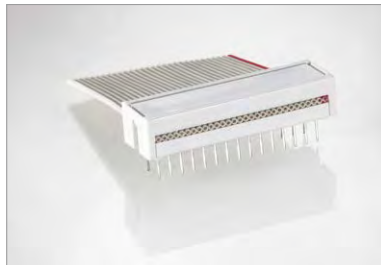
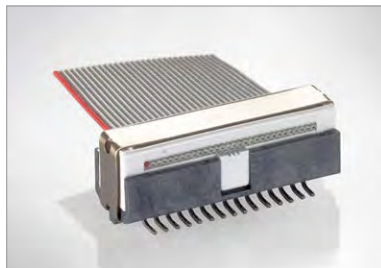
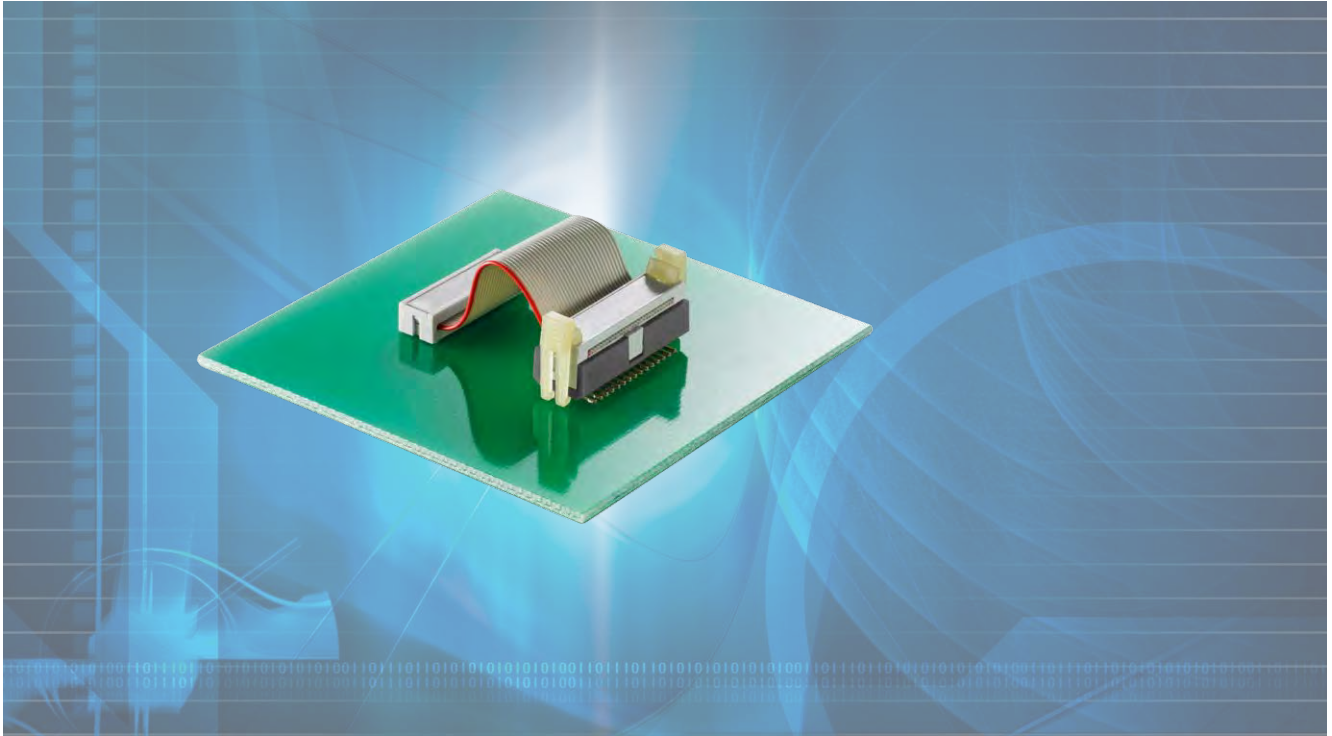
Order information and dimensional table

(All dimensions are in mm)

Number of contacts	Part number	Dimension A	Dimension B	Dimension C	Packaging unit	
					_ = 003 Tube	_ = 050 Tape-and-reel
10	515.568.035.010._	5.08	10.88	3.81	100	400
20	515.568.035.020._	11.43	17.23	10.16	120	400
30	515.568.035.030._	17.78	23.58	16.51	80	400
40	515.568.035.040._	24.13	29.93	22.86	60	400
50	515.568.035.050._	30.48	36.28	29.21	60	400

Number codes, see page 11.

ODU MINI-FLAKAFIX®
IDC PCB connector
Series 533



IDC PCB connector Series 533

2-row, flat cable termination, in pitch 1.27 × 2.54 mm

Features

– 10, 20, 30, 40 and 50 contacts

Technical data

Electrical specification

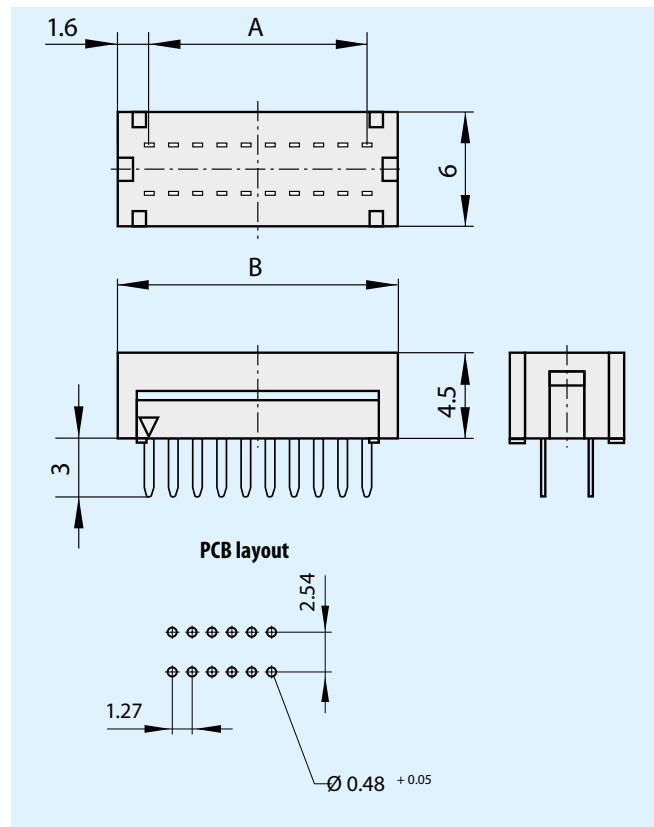
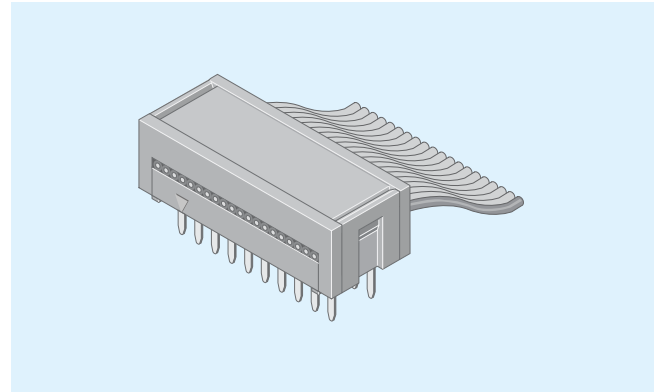
Contact resistance: ≤ 6 mΩ
 Test voltage: 500 V eff.
 Operating voltage: 30 V
 Nominal current: 0.5 A
 (single contact at 25 °C)

Mechanical specification

Operating temperature: -40 °C to +125 °C
 Humidity level: 75 % rel. humidity in accordance with DIN EN 60721-3-3

Material and surface plating

Contact surface
 Termination area: 1 µm Sn on 1.25 µm Ni
 Insulator material: PBT grey
 GF in accordance with UL94 V-0
 Contact material: Copper alloy



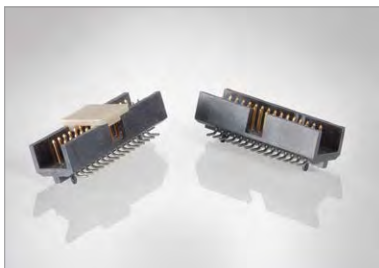
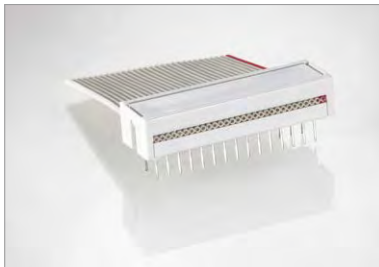
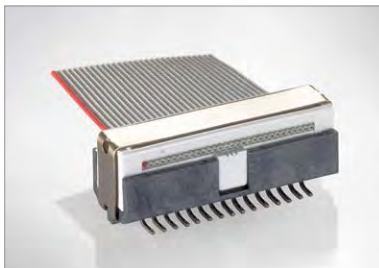
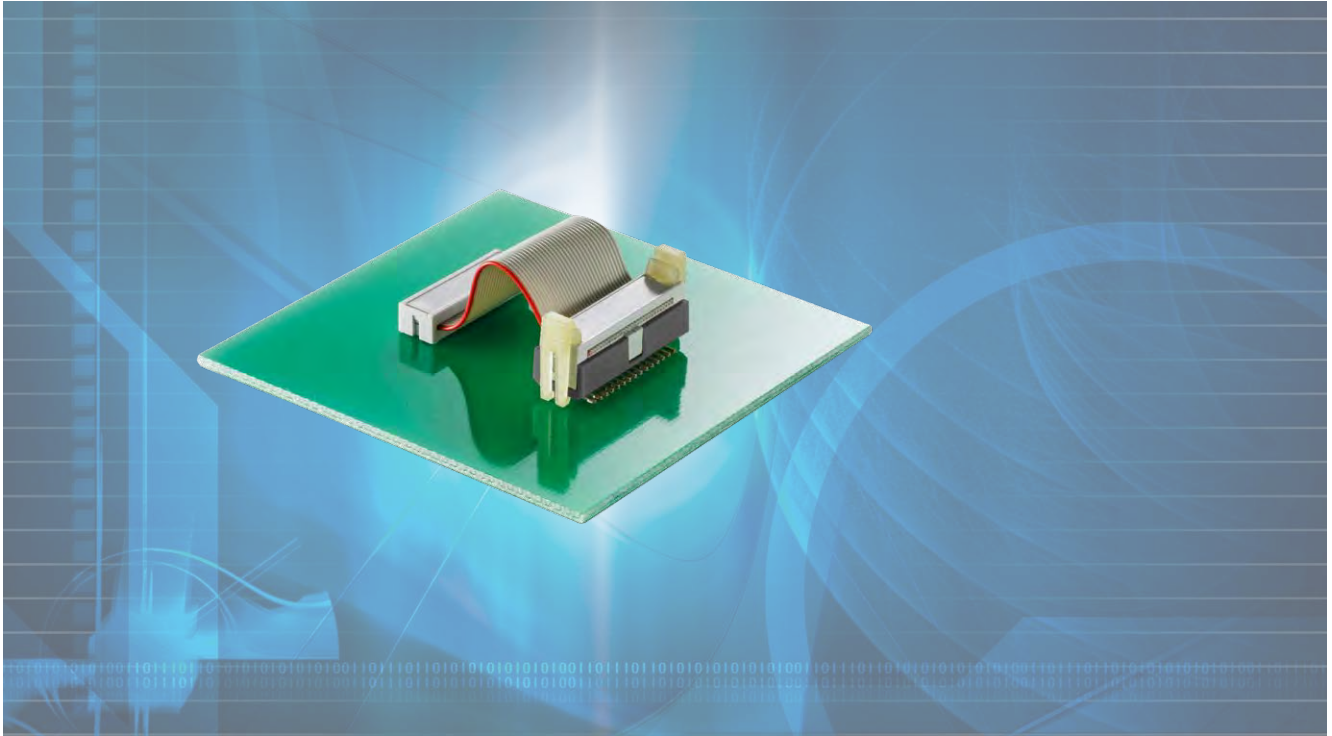
Order information and dimensional table

(All dimensions are in mm)

Number of contacts	Part number ¹⁾	Dimension A	Dimension B	Packaging unit
10	533.040.024.010.010	5.08	8.28	100
20	533.040.024.020.010	11.43	14.63	60
30	533.040.024.030.010	17.78	20.98	80
40	533.040.024.040.010	24.13	27.33	60
50	533.040.024.050.010	30.48	33.68	60

¹⁾ 010 (last block) = Packaging: cardboard box

ODU MINI-FLAKAFIX® Flat cable and processing tools



Contents

MINI-FLAKAFIX® flat cable and processing tools

Chapter		From page	
1	MINI-FLAKAFIX flat cable AWG 30	19	
2	FLAKAFIX processing tools	20	
	FLAKAFIX benchtop press, size 2	20	
	Tool inserts for benchtop press	21	
	FLAKAFIX hand cutting tool	20	

Flat cable AWG 30, MINI-FLAKAFIX® series
Monochrome grey, UL style 2678, in pitch 0.635 mm

Features

- Pitch 0.635 mm
- Stranded wire
- AWG 30
- Mini-flat conductor, monochrome

Technical data

Electrical specification

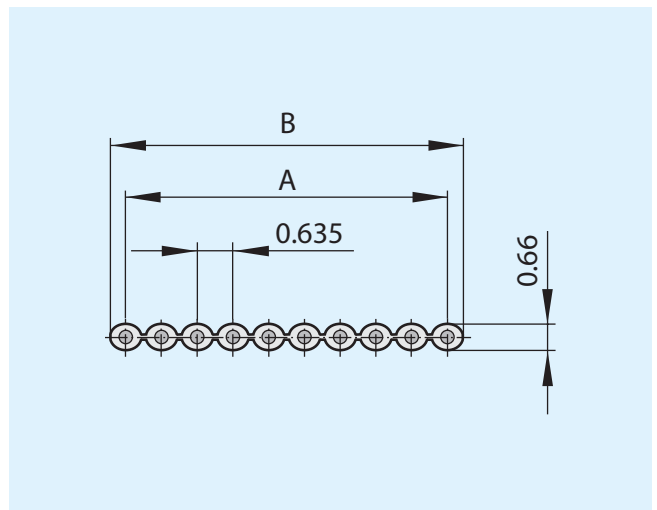
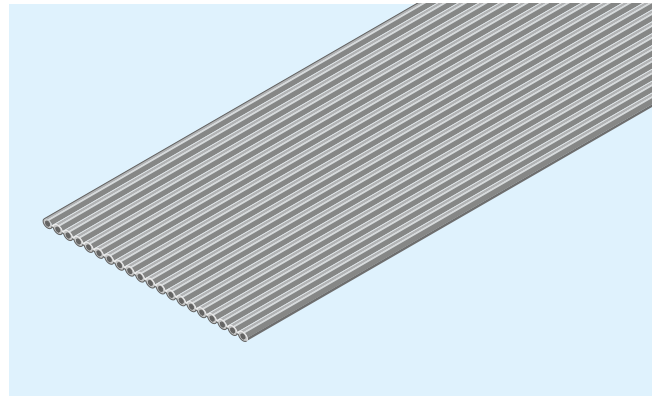
Cross-section:	approx. 0.06 mm ²
Conductor diameter:	approx. 0.30 mm
Conductor structure:	7 pieces with Ø 0.102 mm
Test voltage:	500 V
Operating voltage:	30 V
Current carrying capacity:	max. 1.2 A at 25 °C
Conductor resistance:	354 Ω/km max.
Insulation resistance:	100 MΩ × km
Capacitance (1 kHz):	50 pF / m

Mechanical specification

Operating temperature:	-10 °C to +105 °C
------------------------	-------------------

Material and surface plating

Conductors:	Cu wires: tin-plated (AWG 30)
Insulation:	Special PVC, similar to Y18 acc. to VDE 0207
Colour:	grey with edge wire in different colour
Flame resistance:	acc. to UL VW-1 / CSA FT-1
Shore hardness A:	94 ± 3



Order information¹⁾ and dimensional table

Number of contacts	Part number ¹⁾	Dimension A	Dimension B	Tolerance in dimensions A and B
10	921.659.031.010.000	5.72	6.35	± 0.15
20	921.659.031.020.000	12.07	12.70	± 0.20
30	921.659.031.030.000	18.42	19.05	± 0.25
40	921.659.031.040.000	24.77	25.40	± 0.30
50	921.659.031.050.000	31.12	31.75	± 0.40

¹⁾ On request



ODU does more than just deliver individual assemblies and components. Upon request, we also supply our customers with completely manufactured ODU MINI-FLAKAFIX sets comprising cables and connectors. Send us your drawing.

Processing tools

For time-saving and reliable processing of the different ODU MINI-FLAKAFIX® products, we offer high quality, functional, tested tools coordinated for the application area. They guarantee the user simple handling and effortless work thanks to optimal transmission. The trouble-free retrofitting in just seconds by replacing the press inserts for various connector types requires

a minimum of time. It is also possible to press the connector parallel or at an angle of 90° to the tool. Thanks to its compact construction, the benchtop press is also suitable for especially high demands. This simplifies the tool selection for the user and also ensures that no bad investments result from tool compromises.

Cable processing tools / assembly tools

FLAKAFIX benchtop press, size 2, mounted on a base plate, with tooling plate.

Features

- Hand toggle press
- Suitable for processing small series from the entire ODU MINI-FLAKAFIX program

Order information

MINI-FLAKAFIX benchtop press, size 2
Part number: 099.100.000.000.000



FLAKAFIX hand cutting tool

Features

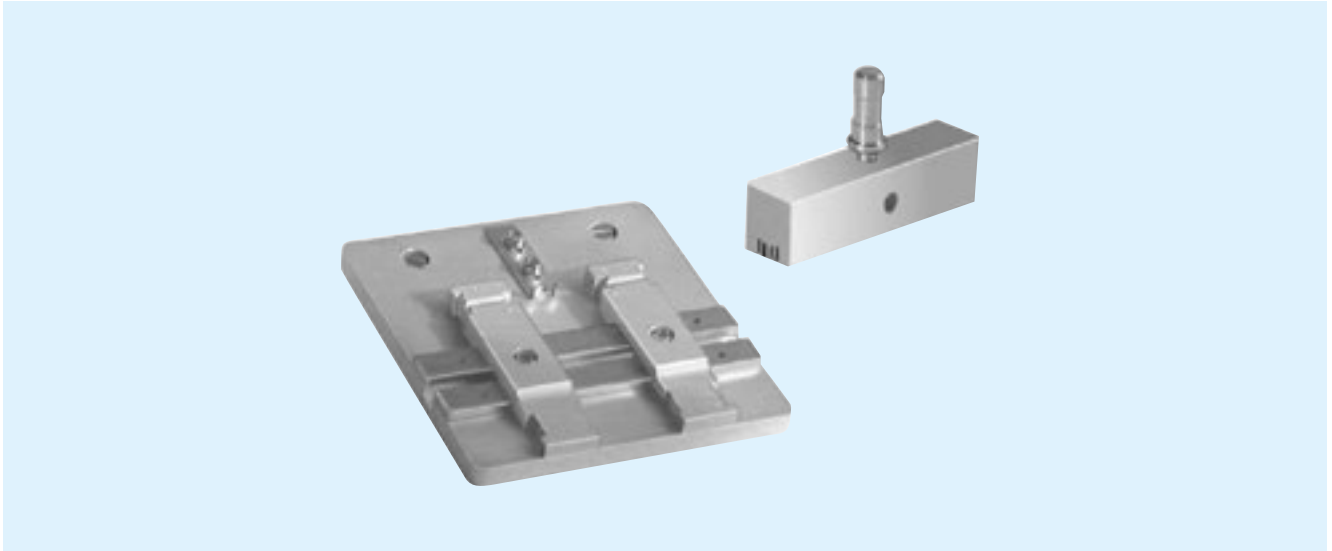
- For trimming flat cable up to 64 contact positions
- Easy to handle
- With lateral cable stop
- Cutting to the precise angle

Order information

MINI-FLAKAFIX hand cutting tool
Part number: 080.001.001.000.000



Tool inserts suitable for the MINI-FLAKAFIX® benchtop press Size 2



The tools can be adjusted to any number of contacts!

Order information and dimensional table

Model	For Series	Assembly plate	Upper die
IDC sockets single-V contact, double action spring contact	525.060..	598.120.005.600.000	598.120.019.600.000
IDC PCB connector 2-row	533.040..	598.120.005.600.000	598.120.018.600.000

ODU recommendation

On request we will gladly send you our processing recommendation 003.062.000.000.000 for assembly of flat cable connectors.



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